

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Norfolk Division**

**DOUGLAS I. HORNSBY, Administrator of
the Estate of CYNTHIA GARY,**

Plaintiff,

v.

Case No. 2:22-cv-427

UNITED STATES of AMERICA, et al.,

Defendant and Third-Party Plaintiff,

v.

**METRO MACHINE CORP., d/b/a
GENERAL DYNAMICS NASSCO – Norfolk**

and

ADVANCED INTEGRATED TECHNOLOGIES, LLC,

Third Party Defendants.

**DEFENDANT AND THIRD-PARTY PLAINTIFF UNITED STATES' RULE 26(a)(2)(B)
DISCLOSURE OF EXPERT TESTIMONY**

Pursuant to Fed. R. Civ. P. 26(a)(2)(B) and the Rule 16(b) Scheduling Order, Defendant,
the United States of America, submits the following disclosure of retained expert testimony:

1. Dr. James Koch

Board of Visitors Professor of Economics Emeritus and President Emeritus
Old Dominion University
305 Brook Avenue, #308
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jkoch@odu.edu

Dr. Koch is offered as a Rule 26(a)(2)(B) expert.

Dr. Koch's qualifications and compensation are set forth in his expert report and exhibits thereto.

2. Gregory J. Paulsen, P.E.
Senior Mechanical Engineer
CED Technologies, Inc.
1315 West College Avenue, Suite 203
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(814) 404-4463

Mr. Paulsen is offered as a Rule 26(a)(2)(B) expert.

Mr. Paulsen's qualifications and compensation are set forth in his expert report and exhibits thereto.

Dated: January 6, 2025

Respectfully submitted,

UNITED STATES OF AMERICA

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CERTIFICATE OF SERVICE

I hereby certify that on January 6, 2025, a copy of the foregoing was served via electronic mail to the following counsel of record:

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Malinda R. Lawrence
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January 6, 2025

Ms. Malinda Lawrence
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Dear Ms. Lawrence:

This is my report in the matter of *Douglas I. Hornsby, Administrator of the Estate of Cynthia Gary v. United States of America et al.* I reserve the right to add to or amend this report should additional information be made available to me.

BACKGROUND

The incident in question occurred on the USS McFaul (DDG 74) on March 15, 2021, in Norfolk, VA. Ms. Gary was working on the vessel for a subcontractor when an accident occurred that led to her death. Her estate has sued the United States of America, alleging a variety of failures that led to her death.

On April 29, 2024, Drs. Jerome S. Paige and Subodh Mathur submitted an expert report to the plaintiff in which they computed alleged economic losses suffered by the plaintiff's estate as a result of Ms. Gary's death. You have asked me to critique this report and as appropriate to submit my own estimates of any economic losses that may have occurred because of Ms. Gary's death.

In this report, I do not opine on any issues relating to whether the United States Government bears any liability for Ms. Gary's accident and death, nor do I opine with respect to the performance of any individuals or organizations connected to this accident.

RELEVANT DEMOGRAPHICS

Ms. Cynthia Gary was born on April 25, 1968 (year 1968.32) and date of the accident was March 15, 2021 (year 2021.20). She was 52.88 years old on that date. Her *Code of Virginia* life expectancy on that date was 30.6 years, which would have brought her to age 83.48 in year 2051.80. See Va. Code § 8.01-419. According to Skoog et al, her work life expectancy on that date was 10.5 years, which would have brought her to retirement at age 63.88 in year 2031.70.

Ms. Gary had two daughters who were living with her in Virginia at the time of the accident. Daughter Selena was 19 years old in October 2024 and daughter Yesenia was 21 years old in October 2024. Her husband, Gregory L., was born on June 25, 1963 (year 1963.48) and was 57.72 years old on the date of the accident. On that date, his *Code of Virginia* life expectancy was 22.7 years, which would bring him to age 80.42 in year 2043.90 (November 25, 2043). See

Va. Code § 8.01-419. Thus, he has no claim for any damages after that date. Mr. Gary was living in Mississippi apart from the rest of his family at the time of the accident.

ANALYSIS

In their report, Drs. Paige and Mathur (P & M) have painted a “best of all worlds” damages scenario that is not supported by the case discovery records that I reviewed. Nor does the P&M report adhere to several widely accepted economic standards utilized by economists. They have developed an analysis in which Ms. Gary --- despite having virtually zero experience as a full-time worker and being the recipient of governmental disability payments --- would have defied recognized probabilities and worked full-time without interruption for more than 14 years, which is five years beyond the length of her statistical expected work life. They assume that Ms. Gary would have maintained full-time employment and would have worked 52 weeks a year without a lapse for these 14 years into the future. But this assumption bears no realistic relationship to her previous working history. In fact, documents supplied by the Virginia Employment Commission reveal that Ms. Gary did not have any earned income in 2016, 2017, 2018, and 2019 (US008278-8286). In 2020, according to US008278 from the Virginia Employment Commission, she earned less than \$2,000. In 2021, prior to her accident, according to the Virginia Employment Commission, she earned less than \$1,800 (US008278). In reviewing Mr. and Mrs. Gary’s joint federal income tax returns, I did not find any W-2 forms for Ms. Gary that indicated otherwise (US000713-837).

Ms. Gary, despite her inexperience in the labor market and absence of earned income, never suffers unemployment in P&M’s modeling, never suffers a layoff, and enjoys annual wage increases of 2.53% per year.

Drs. P & M ignore the reality that Mr. Gary was living apart from his family in Mississippi at the time of the accident. This has two implications. First, it means that he would not benefit personally from any household services provided by Ms. Gary in Virginia. Second, it also means that Ms. Gary’s personal consumption of her own earned income in Virginia rose because Mr. Gary was not present.

The duo also chose a rate of discount (3.89%) that is well below the recognized standard choice in this situation, the 30-year U.S. Government 30-year bond yield (which Bloomberg says was 4.38% on December 4, 2024). That rate was 4.33% on April 29, 2024, when P & M filed their report.

I will now provide details.

Ms. Gary’s Expected Work Life

P & M assume that despite Ms. Gary’s absence of experience in full-time labor markets, she would have worked full-time, never missing a minute, to age 67 --- a span of 14.12 additional years after the accident. This is despite the reality that the average labor force participation rate

of women, 20 years or older, was only 58.7% in October 2024 (Bureau of Labor Statistics, 2024f). Hence, more than 41% of women her age were either not employed, or not seeking a job.

Ms. Gary had begun to work just prior to the accident, but I found no records that indicated how long she intended to continue to work. The recognized statistical authorities in this arena, Skoog et al. (cited above) report that the median expected additional full-time work life for an already working woman aged 52 with a high school diploma is 10.5 years. Since her age at the time of the accident was 52.88, this means that her expected Skoog et al. retirement age was $52.88 + 10.5 = 63.38$ in year 2031.70. P & M chose to add 3.72 years to this widely accepted standard (which they do reference in their report, but do not choose to follow).

However, note that Skoog et al.'s data assume that someone such as Ms. Gary had been working at a full-time job and as noted above, Ms. Gary had a history of not working. Individuals who are unemployed for an extended period of time (such as Ms. Gary) have been shown statistically to have subsequent lower rates of employment --- that is, higher rates of unemployment --- than those individuals who have been working steadily for many years (see, for example, Pissarides, 2000, and Shimer, 2005 and 2012). Thus, P&M's assumption of a 14.22-year work life for Ms. Gary is unrealistic and Skoog's et al.'s data-based 10.5-year work life also is very generous because Ms. Gary had only very recently entered the work force and was receiving disability payments. The record is that she exhibited a consistent history of *not* working. Hence, I reduce Skoog et al.'s estimate of her workforce years by one-third from 10.5 years to 7.0 years; this represents a reasonable adjustment given the circumstances.

The fact that an individual such as Ms. Gary is assumed to be in the labor force does not mean that she would not experience occasional unemployment. The Bureau of Labor Statistics (BLS) of the United States Department of Labor reports that the average probability of a full-time worker being unemployed during the time period 2000-2020 was 10.85% (BLS, 2024a and 2024e) and that the average length of a spell of unemployment was 23.92 weeks between 2000 and 2024 (Federal Reserve Bank of St. Louis, 2024). I do not assume that Ms. Gary would experience any unemployment during the 7.0 years. This provides an additional reason why the assumption of 7.0 years of full-time, uninterrupted employment for Ms. Gary is a reasonable one. P & M did not consider any possibility of unemployment in their analysis.

Rate of Discount

It is widely accepted by the courts and economists that United States Government bond yields provide the best choice when one needs to discount a stream of dollars that stretches into the future, it is vital that these incomes are received with a very high degree of certainty, and there is need for liquidity. United States Government bonds satisfy those characteristics. They carry with them very low financial risk and are highly liquid so that they can easily be bought and sold to generate a reliable stream of income. These are important characteristics for anyone such as Mr. Gary who expects to receive a regular, predictable flow of income generated from a financial award that takes the place of his wife. A popular web site expresses it this way: "*The risk-free*

rate should reflect the yield to maturity (YTM) on default-free government bond issuances of equal maturity as the projected cash flows” (Wall Street Prep, 2024).

What maturity of United States Government bonds is appropriate here? Mr. Gregory L. Gary had an expected life span of 22.7 years at the time of the accident and the closest match to this in terms of conventional United States Government bond maturities is 30-year bonds (as opposed to 10-year bonds, the other major alternative). On December 4, 2024, when I did my analysis, the 30-year bond yield was 4.38% and therefore I adopt it as the appropriate rate of discount. Note that this yield was 4.33% on the date of the accident. Either is significantly above the 3.89% rate of discount chosen by P & M.

MY ESTIMATE OF POSSIBLE LOSSES INCURRED BY CYNTHIA GARY’S ESTATE

My Table One contains my estimates of possible economic losses suffered by Ms. Gary’s estate.

P & M assume that Ms. Gary would have been in the labor force 100% of the time, never missing a minute for 14.2 years. They assume Ms. Gary would have earned \$36,988 had she worked a full year in 2021. That entry appears at the top of column (3) in my Table One. In 2021, this is reduced to $.8 * \$36,988 = \$29,590$ to take account of the fact that only 80% of the year remained on the date of her death. Thereafter, in column (3), I increase the \$36,298 income by the same 2.53% annual rate that P & M utilize.

However, as I noted above, Ms. Gary likely would have been in the full-time labor force only 7.0 years rather than the 14.2 years that P & M assumed. There are additional data available from the Bureau of Labor Statistics that buttresses this 7.0-year estimate. Labor force participation rates (LFPRs) measure the percent of adults who either have a job or are looking for one and this information applies to the 7.0- year work life estimate. In October 2024, the LFPR for women 20 years or older was only 58.7% (Bureau of Labor Statistics, 2024f). Further, in 2023, the LFPR was only 60.3% for women aged 55 to 64 (Bureau of Labor Statistics, 2024g). This means that 39.7% of all women aged 55 to 64 either were not employed, or they were not seeking a job. In either case, they would not be earning any income. It is this 55-to-64- year-old span of years when P & M assume Ms. Gary would have been working full-time. But this is unlikely to have held true because already in 2021 she was receiving governmental disability payments.

Column (4) of my Table One adds the value of fringe benefits, which P & M pegged at 19.10%. I accept this fringe benefits percentage estimate.

Column (5) reduces column (4) by the estimated value of Ms. Gary’s own personal consumption because the funds devoted to her personal consumption would not have been available to Mr. Gary, all the more so because Mr. Gary was in Mississippi. Given that location, I assume that Ms. Gary would have consumed 50% of the income she earned, leaving the remaining 50% available for consumption by her two daughters.

In column (6), I estimate the value of the household services that Ms. Gary was providing her household. P & M estimated this value to be \$17,444 in 2022 and I provisionally accept that estimate and increase this sum annually by the same 2.53% that P & M apply. However, the Bureau of Labor Statistics data concerning the provision of household services within a family assume the family is located in one residence. Reality here is that Mr. Gary was in Mississippi, not in Virginia, and therefore could not benefit from Ms. Gary's provision of services such as meal preparation and the cleaning of the Virginia household. Therefore, Ms. Gary and her two daughters were the recipients of her own household services. Recognizing this, I reduce the value of Ms. Gary's household services to her family (in this case, her two daughters) by 33.33% when compared to the usual family scenario in which a family is united in one location and a husband is present. P & M estimated these services to be worth \$17,444 in 2024; a 33.33% reduction diminishes this to \$11,635.

I assume that Ms. Gary's two daughters, Selena and Yesenia, continue to be residents in Ms. Gary's household through the end of 2030, when they would be adults of approximate ages 25 and 27, respectively. This presumes that the two daughters do not leave the household to "go on their own," or get married and leave, or decide to rent their own apartment (to note several of the possibilities).

I expand the \$11,635 number at 2.53% annually through the end of 2030. At that time, both of her daughters are presumed to have left the household and are on their own. Hence, at that point, they would benefit only minimally from Ms. Gary's household services. I assume thereafter they would receive 10% of the value of Ms. Gary's household services through 2035 even though it is likely they would by then have been living apart and have their own households.

Column (7) reflects the sum of columns (5) plus (6).

In column (8), I discount column (7) at 4.38%, the yield on 30-year United States Government bonds on December 4, 2024. This generates a present value of **\$277,349** with respect to Ms. Gary's lost income and household services during her expected work life and life span.

SUMMARY

The report of Drs. Page and Mathur (P & M) generates excessive estimates of possible economic losses suffered by the estate of Ms. Cynthia Gary. This is due to their selecting an overly long work life for Ms. Gary; not taking account of labor force participation rates; not considering the possibility of her being unemployed; and choosing an inappropriately low rate of discount. When appropriate adjustments are made (using an appropriate work life for Ms. Gary; taking account of likely labor force participation; taking account of the possibility of her unemployment; and using an appropriate rate of discount), then the present value of estimated losses incurred by the estate declines from P & M's \$1,024,937 to **\$277,349**.

Hence, based upon the application of accepted economic principles and to a reasonable degree of economic probability, I estimate that the economic losses sustained by the Gary estate are **\$277,349.**

I have attached my Curriculum Vitae. I am being compensated at the rate of \$400 per hour.

SOURCES CONSULTED

Among the sources I consulted in preparing this report were:

Bloomberg. “Treasury Yields” (December 4, 2024), <https://www.bloomberg.com/markets/rates-bonds/government-bonds/us>.

Bureau of Labor Statistics(a), *The Economics Daily*, 15.7 percent of people who worked or looked for work experienced unemployment in 2020 at <https://www.bls.gov/opub/ted/2021/15-7-percent-of-people-who-worked-or-looked-for-work-experienced-unemployment-in-2020.htm>,

Bureau of Labor Statistics(b), Table 1, Time Spent in Primary Activities...2023 Annual Averages, <https://www.bls.gov/news.release/atus.t01.htm>.

Bureau of Labor Statistics(c), Annual Report: Highlights of Women’s Earnings, <https://www.bls.gov/cps/earnings.htm#demographics>.

Bureau of Labor Statistics(d), 2024, Table 1, Median usual earnings of full-time wage and salary workers, by selected characteristics, 2020 annual averages (and other years).

Bureau of Labor Statistics(e), 2024, Number of people unemployed at some time during the year as a percent of those who worked or looked for work during the year, 1958–2020, www.bls.gov/news.release/pdf/work.pdf.

Bureau of Labor Statistics(f), 2024. Civilian Labor Force Participation Rate, Seasonally Adjusted. www.bls.gov/charts/employment-situation/civilian-labor-force-participation-rate.htm.

Bureau of Labor Statistics(g). 2024. Civilian Labor Force Participation Rate by Age, Sex, Race, and Ethnicity. Table 3.3. www.bls.gov/emp/tables/civilian-labor-force-participation-rate.htm.

Code of Virginia. § 8.01-419. Table of life expectancy. <https://law.lis.virginia.gov/vacode/title8.01/chapter14/section8.01-419>.

Complaint. *Douglas L. Hornsby, Administrator of the Estate of Cynthia Gary v. United States of America*, United States District Court for the Eastern District of Virginia, Norfolk Division, Case 2:22-cv-00427.

Federal Reserve Bank of St. Louis (FRED). 2024. Average Weeks Unemployed,” <https://fred.stlouisfed.org>.

Paige, Jerome S. and Subodh Mathur. Expert Report re *Hornsby v. United States of America*, April 29, 2024.

Pissarides, Christopher (1985): “Short-Run Equilibrium Dynamics of Unemployment, Vacancies, and Real Wages,” *American Economic Review*, 75(4), 676–690

Ruble, Michael R., Robert T. Patton and Donald M. Nelson. 2019. “Patton-Nelson Personal Consumption Tables 2016-17,” *Journal of Legal Economics*, 25(1-2), 75-89.

Rudolf, Chester. Expert Report re *Hornsby v. United States of America*, November 28, 2024.

Shimer, Robert. (2007). “Reassessing the Ins and Outs of Unemployment,” National Bureau of Economic Research, Working Paper 13421, www.nber.org/system/files/working_papers/w13421/w13421.pdf.

Shimer, Robert. (2012). “Reassessing the Ins and Outs of Unemployment,” *Review of Economic Dynamics*, 15(April), 127-148.

Skoog, Gary, James Ciecka, and Kurt V. Krueger (2019). “The Markov Model of Labor Force Activity 212-17: Extended Tables of Central Tendency, Shape, Percentile Points, and Bootstrap Standard Errors,” *Journal of Forensic Economics*, 28(1-2), 15-108.

Social Security Administration. Itemized Statement of Earnings for Cynthia Gary, 2015 through 2021.

United States Department of Justice Documents Tracking Log of documents provided to James V. Koch. Included as an attachment to this report.

Wall Street Prep. “Risk Free Rate.” (December 4, 2024). www.wallstreetprep.com/knowledge/risk-free-rate.

Bates/ECF No.	Description
ECF No. 111	Court Order on Motions To Dismiss
ECF No. 114-1	Proposed Third-Party Complaint
ECF No. 21	Amended Complaint
ECF No. 93	Magistrate's Report & Recommendation on Motions To Dismiss
AAR 000001-6	Amended Autopsy Report
AAR 000001-6	Plaintiff's RFP/ROG responses
AR 000001-33	Autopsy Photographs
CG 000001-6	Cynthia Gary & family photographs
CMS 0001-1421	Plaintiff's RFP/ROG responses
CMS CIT 000001-9	Misc. documents Plaintiff obtained from OSHA
CMS000001-2	Misc. documents Plaintiff obtained from OSHA
DC 000001	Death Certificate
EMS 000001-4	EMS Report
HIS 000001-3	Misc. documents Plaintiff obtained from OSHA
HIS CIT 000001-11	Misc. documents Plaintiff obtained from OSHA
HISSDT000001-185	Plaintiff's RFP/ROG responses
HNSBY-00000001-369	Plaintiff's RFP/ROG responses
MCFAUL 000001-26	Photographs of/aboard USS McFAUL 2/2/23
NOC 000001-5	Misc. documents Plaintiff obtained from OSHA
OSHA 000001-96	Misc. documents Plaintiff obtained from OSHA
US0001597-1604	Responsive documents from SSA
US000698-886	Responsive documents from IRS and VA Dept. of Taxation
US0008278-8287	VA Employment Commission subpoena response
US0008288-8297	Miss. Dept. of Empl. Sec. subpoena response
US0008298-8302	NIC Div. of Empl. Sec. subpoena response
US0012708-12729	Butler Snow resp to subpoena of Community Care Ctr. Of Grenada 8/26/24

Cynthia Gary Table One

Born: 042568 (1968.32)

Date of Injury: 031521 (2021.20) at her age 52.88

Code of Virginia Life Expectancy: 30.6 to age 83.48 in year 2051.80

Work Life Expectancy: 7.0 years to age 60.38.88 in year 2028.20

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>Year</u>	<u>Ms. Gary Age at Beginning of Year</u>	<u>Estimated Lost Earnings</u>	<u>Plus Estimated Lost Fringe Benefits @ 19.10%</u>	<u>Reduction of (4) for 50% Personal Consumption</u>	<u>Estimated Value of HH Services</u>	<u>Sum of Columns (5) + (6)</u>	<u>Present Value at 4.38%</u>	<u>Rolling Total</u>
		\$36,988						
2021.8	52	\$29,590	\$35,242	\$17,621	\$11,635	\$29,256	\$29,256	\$29,256
2022	53	\$37,924	\$45,167	\$22,584	\$11,635	\$34,219	\$34,219	\$63,475
2023	54	\$38,883	\$46,310	\$23,155	\$11,635	\$34,790	\$34,790	\$98,265
2024	55	\$39,867	\$47,482	\$23,741	\$11,635	\$35,376	\$35,376	\$133,641
2025	56	\$40,876	\$48,683	\$24,341	\$11,930	\$36,271	\$34,749	\$168,390
2026	57	\$41,910	\$49,915	\$24,957	\$12,231	\$37,189	\$34,133	\$202,523
2027	58	\$42,970	\$51,177	\$25,589	\$12,541	\$38,129	\$33,528	\$236,051
2028.2	59	\$8,811	\$10,494	\$5,247	\$2,572	\$7,819	\$6,587	\$242,638
2028.8	59				\$10,286	\$10,286	\$8,666	\$251,303
2029	60				\$13,183	\$13,183	\$10,640	\$261,943
2030	61				\$13,517	\$13,517	\$10,451	\$272,395
2031	62				\$1,386	\$1,386	\$1,027	\$273,421
2032	63				\$1,421	\$1,421	\$1,008	\$274,430
2033	64				\$1,457	\$1,457	\$991	\$275,420
2034	65				\$1,494	\$1,494	\$973	\$276,393
2035	66				\$1,532	\$1,532	\$956	\$277,349
Totals		\$440,805	\$334,470	\$167,235	\$130,090	\$297,325	\$277,349	

JAMES V. KOCH

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and President Emeritus
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Marital Status: Married to Donna Stickling Koch, B.A., Illinois State University (1966), M.A. (1969). Old Dominion University, M.A. (2001). Two children.

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Ph.D., Northwestern University (1968)
Ph.D., (honorary), Yeungnam University,
Taegu, Korea (1984)
Ph.D. (honorary), Toyo University,
Tokyo, Japan (1987)
Ph.D. (honorary), Kyushu Institute of Technology,
Kitakyushu, Japan (1995)
Doctor of Humane Letters (honorary), Illinois State University (2009)

Dissertation: The Demand Functions of the Household Sector for Liquid Financial Wealth: An Econometric Study

Experience: Board of Visitors Professor of Economics and President Emeritus, Old Dominion University, Hampton Roads, VA, July, 2001-2017 (part-time since then)

President and Professor of Economics, Old Dominion University, Hampton Roads, VA, July, 1990-2001

President and Professor of Economics, University of Montana, Missoula, MT, September 1986-June 1990

Provost and Vice President for Academic Affairs, Professor of Economics, Ball State University, Muncie, IN, August 1980-August 1986.

Dean, Faculty of Arts and Sciences and Professor of Economics, Rhode Island College, Providence, RI, May 1978-August 1980.

Chairman, Department of Economics, College of Arts and Sciences, Illinois State University, Normal, IL, 1972-1978.

Assistant, Associate, and Full Professor of Economics, Illinois State University, 1967-1978.

Research Economist, Harris Trust and Savings Bank, Chicago, IL, 1966-1967.

Visiting Positions:

Visiting Professor, Department of Financial Economics and Institutions, University of Hawaii, Fall, 2001.

Visiting Scholar, Royal Melbourne Institute of Technology, Melbourne, Australia, Fall, 1995.

Visiting Professor of Business Economics and Quantitative Methods, University of Hawaii, Honolulu, HI, Fall, 1985.

Visiting Professor of Economics, Brown University, Providence, RI, Spring, 1975.

Visiting Professor of Economics, University of Grenoble, France, Fall, 1974.

Visiting Associate Professor of Economics, California State University at Los Angeles, Summer 1972.

Significant Board Memberships

WIPB-TV Public Television, Muncie, IN (1980-86)
First Interstate Bank, Missoula, MT (1986-90)
State of Montana Alliance for Science and Technology (1986-90)
Mansfield Foundation (1986-90)
Missoula Economic Development Corporation (1986-90)
National Prepaid Tuition Plan (1989-93)
Community Hospital Foundation (1989-90)
Urban League, Hampton Roads (1990-2001)
Sun Trust Bank, Hampton Roads (1990-2001)
Future of Hampton Roads (1990-2001)
Center for Innovative Technology, Commonwealth of Virginia (1990-2001)
Greater Norfolk Corporation (1990-2001)
WHRO Public Television (1993-97)
Virginia Commercial Space Flight Authority (1996-2001)
Virginia Research and Technology Advisory Commission (2001-2)
MacArthur Foundation (1992-2010)
Bureau of Business and Economic Research, University of Montana (2003-2007)
Eastern Virginia Medical School (1999-2001, 2005-2012)
Esmark Corporation (including former Wheeling-Pittsburgh Steel Company, 2006-2008)
Partners for College Affordability and Public Trust

Academic Specialties: Industrial Organization, Pricing, and Antitrust
Microeconomic Theory
Economics of Education
Economics of E-Commerce

External Grants Received: National Science Foundation
Illinois Board of Higher Education
U.S. Dept. of H.E.W.
Kauffman Foundation

Honors: Pi Gamma Mu Honorary
Sigma Xi Scientific Research Honorary
Golden Key Honorary
Beta Gamma Sigma Honorary
Phi Kappa Delta Honorary
Teacher of the Year, Illinois State University, 1977-1978
Alumni Achievement Award, Illinois State University, 1985
Executive of the Year, Missoula, MT, Economic Development Corp, 1988
Distinguished Alumni Award, Illinois State University, 1994
Tidewater Humanitarian Award, National Conference of Christians and
Jews, 1996

Real Dream Award, Martin Luther King Family Life Institute, Norfolk,
VA, 1998
Sportsman of the Year, Norfolk Sports Club, 2000
The Image Award, Old Dominion University Chapter of the National
Association for the Advancement of Colored People, 2000
Department of the Army, Outstanding Civilian Service Award, 2001
Department of Navy, Meritorious Public Service Award, 2001.
College of Arts and Sciences Hall of Fame, Illinois State University, 2005

Foreign Language Fluency: Spanish (good)
German (fair)

Publications:

Books:

Industrial Organization and Prices (Prentice-Hall, 1974, Second Edition, 1980).

Microeconomic Theory and Applications (Little, Brown and Company, 1976).
Solutions Manual Included.

The Economics of Affirmative Action, J.F. Chizmar, co-author (D.C. Heath and
Company, 1976).

Introduction to Mathematical Economics, A.O. Ostrosky, co-author (Houghton,
Mifflin Company, 1980). Solutions Manual Included.

Contemporary Personal Finance, four co-authors (Allyn and Bacon, 1985).
Workbook Included.

Introduction to Mathematical Economics, Revised Edition, A.O. Ostrosky, co-
author (Waveland Press, 1986).

Presidential Leadership: Making a Difference, James L. Fisher, co-author
(American Council on Education and Oryx Press, 1996).

The Entrepreneurial College President (American Council on Education and
Praeger, 2004), James L. Fisher, co-author.

Born, Not Made, James L. Fisher, co-author (Praeger, 2008).

*America for Sale? The Profits and Perils of Being Hunted and Devoured by the
(Foreign) Pack*, Craig T. Bouchard, co-author (Praeger, 2009)

The Caterpillar Way: Lessons in Leadership, Growth, and Shareholder Value (with Craig T. Bouchard), McGraw-Hill, 2013. Rose to #8 on the *New York Times* best seller list in business in November 2013.

The Impoverishment of the American College Student. Brookings Institution, July 2019).

Runaway Costs: How Public University Governing Boards Fail to Protect Their Students. Johns Hopkins University Press, Summer 2020. Richard J. Cebula, co-author.

Vital and Valuable: The Relevance of HBCUs to American Life and Education (Omari Simkins, co-author). An empirical study of the performance of HBCUs. Columbia University Press will publish this book in late 2022.

Monographs:

A Benefit-Cost Analysis of Vocational-Occupational Training at Selected Junior Colleges (Springfield, IL: State of Illinois Advisory Council on Vocational Education, 1972).

An Analysis of the Process, Intent, Distribution, and Effects of Funding for Vocational and Technical Education in the State of Illinois (Springfield, IL: State of Illinois Advisory Council on Vocational Education, 1972). Randyl Elkin, co-author.

The Distribution and Effects of Vocational and Technical Education Funding in FY-1972 (Springfield, IL: State of Illinois Advisory Council on Vocational Education, 1973), Randyl Elkin, co-author.

The Economics of Branch Banking (Chicago, IL: The Illinois Bankers Association, 1977).

The State of the Region, 2000 (Norfolk: Old Dominion University, 2000).

The State of the Region, 2001 (Norfolk: Old Dominion University, 2001).

The State of the Region, 2002 (Norfolk: Old Dominion University, 2002).

The State of the Region, 2003 (Norfolk: Old Dominion University, 2003).

Additional Academic Programs at Florida Gulf Coast University: The Needs of the Lee/Collier/Charlotte Area (Fort Myers, FL, 2003).

The State of the Region, 2004 (Norfolk: Old Dominion University, 2004).

The State of the Region, 2005 (Norfolk: Old Dominion University, 2005).

The State of the Region, 2006 (Norfolk: Old Dominion University, 2006).

The State of the Region, 2007 (Norfolk: Old Dominion University, 2007).

The State of the Region, 2008 (Norfolk: Old Dominion University, 2008).

The State of the Region, 2009 (Norfolk: Old Dominion University, 2009).

The State of the Region, 2010 (Norfolk: Old Dominion University, 2010).

The State of the Region, 2011 (Norfolk: Old Dominion University, 2011).

The State of the Region, 2012 (Norfolk: Old Dominion University, 2012).

The State of the Region, 2013 (Norfolk: Old Dominion University, 2013).

Turning the Page: An Economic Analysis of Textbooks (Lumina Foundation, 2013), www.luminafoundation.org/category/convenings/.

The State of the Region, 2014 (Norfolk: Old Dominion University, 2014).

The State of the Region, 2015 (Norfolk: Old Dominion University, 2015).

The State of the Region, 2016 (Norfolk: Old Dominion University, 2016).

The State of the Region, 2017 (Norfolk: Old Dominion University, 2017)

The State of the Commonwealth, 2015 (Norfolk: Old Dominion University, 2015)

The State of the Commonwealth, 2016 (Norfolk: Old Dominion University, 2016)

The State of the Commonwealth, 2017 (Norfolk: Old Dominion University, 2017)

Articles:

"Homogeneity in Wealth: Demand Functions for Liquid Financial Assets," *Rivista Internazionale di Scienze Economiche e Commerciali* (October, 1969).

"The Homogeneity Assumption and Financial Asset Demand Functions," *Quarterly Review of Economics and Business* (Winter 1969).

"A Closer Look at Price Discrimination in an Imperfect World," *Review of Business and Economics* (Spring 1970).

"Market Structure and Industry Growth Rates," *Rivista Internazionale di Scienze e Commerciali* (December 1970).

"Advertising and Economic Growth," *Journal of Advertising Research* (August 1971).

"The Economics of Drug Control Policies," (S.E. Grupp, co-author), *The International Journal of the Addictions* (December 1971).

The Influence of Industry Market Structure Upon Industry Price-Cost Margins," (R. Fenili, co-author), *Rivista Internazionale di Scienze e Commerciali* (November 1971).

"The Demand Functions of the Household Sector for Liquid Financial Assets," *Journal of Finance* (September 1971), abstract.

"The Economics of 'Big-Time' Intercollegiate Athletics," *Social Science Quarterly* (September 1971).

"The Economics of Drug Control Policies," reprinted in *Economics: A Synergetic Approach*, by McCarney and Owen (Dryden Press 1972).

"On a Critique of Positive Economics," *The American Journal of Economics and Sociology* (June 1972).

"The Effects of Market Structure Upon Industry Growth," *Review of Business and Economics* (Fall 1972).

"Student Choice of Undergraduate Major Field and Private Internal Rates of Return," *Industrial and Labor Relations Review* (October 1972).

"The Comparative Returns to an Undergraduate Education," in *Principles of Macroeconomics and Money*, by Ireland and Rutner (Dryden Press 1973).

"Blood and American Social Attitudes," (T. Ireland, co-author), in *The Economics of Charity* (Institute of Economic Affairs, Great Britain 1973).

"The Influence of Teaching and Other Factors Upon Absolute Salaries and Salary Increments at Illinois State University," (J. Chizmar, co-author) *Journal of Economic Education* (Fall 1973).

"A Linear Programming Model of Resource Allocation in a University," *Decision Sciences* (October 1973).

"Police and Illicit Drug Markets: Some Economic Considerations," *British Journal of the Addictions* (December 1973).

"Police and Illicit Drug Markets: Some Economic Considerations," reprinted in *The Marijuana Muddle*, by S.E. Grupp (D.C. Heath 1973).

"A Troubled Cartel: The NCAA," *Law and Contemporary Problems* (Winter 1973).

"The Political Economy of Blood," (T. Ireland, co-author) *Journal of Behavioral Economics* (January 1974).

"A Linear Programming Model of Resource Allocation in an Academic Institution," reprinted in *Conference Volume on the Costs and/or Benefits of Education* (New York: City College of New York 1974).

"Oligopoly Theory and Sport," in *The Economics of Professional Sports*, Proceedings of the Conference on the Economics of Professional Sports, Washington, DC 1974.

"Industry Market Structure and Industry Price-Cost Margins," *Industrial Organization Review* (Fall 1974).

"Internal Rates of Return and Student Enrollments: Rejoinder," *Industrial and Labor Relations Review* (January 1975).

"Collective Bargaining, Student-Teacher Ratios, and Teachers' Salaries," (A.O. Ostrosky, co-author) *Rivista Internazionale di Scienze e Commerciali* (October 1975).

"A Troubled Cartel: The NCAA," portions reprinted in *Sports: A Program for America*, by James Michener (Random House 1976).

"A Linear Programming Model of Resource Allocation in a University," reprinted in *Readings in Management Science*, by E. Turban and N.P. Loomba (Business Publications 1976).

"Sex Discrimination and Affirmative Action in Faculty Salaries," (J. Chizmar, co-author) *Economic Inquiry* (March 1976).

"Title IX and the NCAA," *Western State University Law Review* (Spring 1976).

"The Unfairness of 'How to Evaluate the Fairness of Faculty Salaries on Your Campus,'" (J. Chizmar, co-author) *Bulletin of the American Association of University Professors* (Spring 1976).

"A Troubled Cartel: The NCAA," portions reprinted in *Sports in America*, by James Michener (Fawcett Books 1977).

"Some Economic Effects and Causes of State and Local Government Commitment to Public Education," (M. Fabrycy, co-author) *Indian Journal of Economics* (April 1978).

"A Note on the Positive Definiteness of Quadratic Forms," (R. Cebula, co-author) *Southern Economic Journal* (April 1978).

"The NCAA: A Socioeconomic Analysis," (W.L. Leonard, co-author) *American Journal of Economics and Sociology* (July 1978).

"Reply to Professor Cohn," (J. Chizmar, co-author) *Economic Inquiry* (1978).

"A Troubled Cartel: The NCAA," reprinted in *Economics: A Reader*, by K. Elzinga (Harper and Row 1978).

"An Enrollment Shares Model of Higher Education," (R. Cebula, L.D. Hiebert co-authors) *Annals of Regional Science* (March 1979).

"An Exploratory Note on Living Cost Differentials," (R. Cebula, co-author) *Atlantic Economic Journal* (September 1980).

"The Crowding Out Effect: A Federal Government Outlay Decision," (R. Cebula, co-author) *Public Choice* (1981).

"The Curious Case of the Journal Manuscript Market: Ethics Versus Efficiency in Academe," (R. Cebula, co-author) *American Economist* (Spring 1982).

"Salary Equity Issues in Higher Education: Where Do We Stand?" *Bulletin of the American Association for Higher Education* (October 1982).

"Comparable Worth in Academe: Long Overdue Equity or Pandora's Box?" *Educational Record* (April 1983).

"Intercollegiate Athletics: An Economic Explanation," *Social Science Quarterly* (June 1983).

"Comparable Worth, Markets, and Quality in Secondary Education," *National Forum* (Spring 1984).

"The Economics of 'Big-Time' Intercollegiate Athletics, reprinted in Steven A. Riess (ed.), *The American Sporting Experience* (Leisure Press 1984).

"The Economist and Academic Administration," in S. Asefa (editor), *Applied Economics: Private and Public Decisions* (Iowa State University Press 1985).

"The Market for College Graduates: Current Myths and Emerging Realities," *Liberal Education* (Spring 1985).

"The Realities of Amateur Sports Organization," *Indiana Law Review* (1985).

"The Intercollegiate Athletics Industry," in Walter Adams (ed.), *The Structure of American Industry*, Seventh Edition (MacMillan, 1986).

"The Incomes of Recent Immigrants: A Look at Ethnic Differences," *Social Science Quarterly* (June 1987).

"Korean-American Economic Relationships: Problems and Prospects," in *Proceedings of the International Conference on Economic Development and Social Change* (Taegu, Korea: Yeungnam University Press 1987).

"Is There Discrimination in the 'Black Man's Game'?" (W.Vander Hill, co-author), *Social Science Quarterly* (March 1988).

"An Economic Profile of the Pacific Rim," *Business Horizons* (March-April 1989).

"Welfare Policies and Migration of the Poor in the United States: An Empirical Note," (R. Cebula, co-author) *Public Choice* (May 1989).

"An Empirical Note on Deficits, Interest Rates, and International Capital Flows," (R. Cebula, co-author) *Quarterly Review of Economics and Business* (Autumn 1989).

"Geographic After-Tax Real Income Differentials and Population Growth Rates," (R. Cebula, co-author) *Atlantic Economic Journal* (March 1990).

"A Further Note on Determinants of Geographic Living-Cost Differentials," (R. Cebula, co-author) *Quarterly Journal of Economics and Finance* (Winter 1992).

"A Note on Smoking and Health Costs," *American Journal of Economics and Sociology*, R. Cebula, co-author (April 1992).

"Federal Budget Deficits, Interest Rates, and International Flows," *The Quarterly Review of Economics and Finance*, R. Cebula, co-author (Spring 1994)

"In Search of Excellent Management," *Journal of Management Studies*, R. Cebula, co-author (September 1994)

"Disseminating Scholarly Output and the Eliminating of the Exclusivity of Journal Submissions: *Deja Vu*," *American Journal of Economics and Sociology* (January 1996)

"Higher Education and TQM," *Total Quality Management*, J.L. Fisher, co-author (Number 8, 1998)

"The Revolution in Higher Education," *The Richmond Journal of Law and the Public Interest* (Fall 1998), published online at www.richmond.edu/~perspec

"Reality Check: Why Standard Graduation Rates Don't Truly Measure Every Campus's Success," *Currents* (March, 1999)

"U.S. Federal Budget Deficits: An Exploratory Empirical Note on Determining Factors During the Carter Administration," *Economia Internazionale* (August 1999), R. Cebula, co-author

"Intercollegiate Athletics: An Economic Explanation." In *The Economics of Sports, Volume 2* (2001).

"Price, Quality and Service on the Internet: Sense and Nonsense," *Contemporary Economic Policy* (January 2002), R. Cebula, co-author

"An Empirical Analysis of Identity Theft Determinants in the U.S.," *Review of Business Research* (6, 2007), with two co-authors.

"The Impact of Undocumented Immigration on ID Theft in the United States: An Empirical Study" (R. Cebula, co-author), *Open Economics Journal*, 1 (2008), 37-46.

"The Relative Decline of a Musgrave 'Merit Good': The Case of Public Support of Flagship State Universities," *Journal of Economics and Finance* (October 2008).

Review of Sebag-Montefiore, Hugh, *Dunkirk: Fight to the Last Man*. H-German, H-Net Reviews. May 2009.

URL: <http://www.h-net.org/reviews/showrev.php?id=24055>

Review of Stansky, Peter. *The First Day of the Blitz*. New Haven: Yale University, 2007. H-Net Reviews, October 2009. URL: <http://www.h-net.org/reviews/showrev.php?id=25198>.

"Do Investors Care If Steve Jobs Is Healthy?" *Atlantic Economic Journal*, 39(1), 2011, 39-50. R. Fenili and R. Cebula, co-authors.

"The Bank Failure Rate, Economic Conditions and Banking Statutes in the U.S., 1970-2009," *Atlantic Economic Journal*, 39(1). R. Fenili, R. Cebula, co-authors.

Review of Mark Mazower, *Hitler's Empire: How the Nazis Ruled Europe*, *Global War Studies*, 8(1), 2011.

"Managerial Influences on Baseball Performance: The Roles of Age and Experience," *Journal of Economics and Finance*, April 2012 (B. Demiralp, C. Colburn, co-authors).

"Still No Significant Difference? The Impact of Distance Learning on Student Success in Undergraduate Managerial Economics," *Journal of Economics and Finance Education* (Summer 2012), A. McAdory, co-author.

Review of Peter Sasgen, *Hellcats* in *Global War Studies*, 9(1), 2012.

"Regional Impacts of the World-Wide Recession: A Case Study of Hampton Roads, Virginia," *International Advances in Economic Research* (May 2012).

"Shattered Myths: The Tank Battle at Prokhorovka, July 1943" *Global War Studies*, 9(2), 2012.

"Using Event Studies to Assess the Impact of Unexpected Events," *Business Economics* (Robert N. Fenili, co-author), February 2013.

"Why Do People Move from One Metropolitan Area to Another?" R.J. Cebula et al. (eds.), *Economic Behavior, Economic Freedom and Entrepreneurship* (Edward Elgar 2015).

"Differing Views of Lodging Reality: Airdna, Smith Travel Research, and Airbnb," *Cornell Hospitality Quarterly* (two co-authors, October 2018).

"The Effects of Role Models on College Graduation Rates," *Journal of Economics and Finance* (with Ziniya Zahedi, July 2018).

“A Tale of Two Tunnels: Economic Effects of Newly Imposed Tolls on Heavily Traveled Tunnel Venues in Virginia,” *Journal of Regional Analysis and Policy* (with Ziniya Zahedi, May 2019).

“The Relationship Between Entrepreneurial Activity and Domestic Gross State In-Migration Patterns in the U.S.,” *Applied Economics*, three co-authors (March 2020).

“Drug-Overdose Death Rates: The Economic Misery Explanation and Its Alternatives,” *Applied Economics* (September 2020), with Barbara Blake-Gonzalez and Richard J. Cebula.

“The Drug Overdose Epidemic Seen Through Different Lenses,” *Health Science Journal* (December 2020), with Barbara Blake-Gonzalez and Richard J. Cebula.

“The Crisis in Public Higher Education: A New Perspective,” *American Journal of Economics and Sociology*, (January 2021), with Richard J. Cebula.

“Airbnb’s Success: Does It Depend on Who’s Measuring?” *Cornell Hospitality Quarterly*, with Vinod Agarwal and Robert McNab (November 2022), <https://doi.org/10.1177/19389655211029914>

“Pulling Back the Veil: What Determines HBCU Campus Enrollments?” *Social Science Quarterly* (March 2022), Omari H. Swinton, co-author, <https://doi.org/10.1111/ssqu.13132>.

“Why Has the Median Income of Lawyers Been Declining?” *Journal of Economics and Finance* (July 2022), <https://doi.org/10.1007/s12197-022-09588-6>. (Barbara Blake-Gonzalez, co-author).

“Using the LSAT as a Thermometer for the Labor Market for Lawyers,” *American Journal of Economics and Sociology*, forthcoming, Barbara Blake-Gonzalez, co-author.

Selected Other Miscellaneous Publications

"The Problem of Equal Pay for Equal Work," *The Chronicle of Higher Education* (27 January 1982).

"A University President Looks at Intercollegiate Athletics," *Richmond Times-Dispatch* (21 January 1991).

"Virginians Should Adopt 'Compact' for Higher Ed," *Richmond Times-Dispatch* (30 September 1993).

"Difficulties for Virginia's Deans," *Washington Post* (10 October 1993).

"Feed The Gazelles: To Grow Jobs, Virginia Must Cultivate Its Universities," *Roanoke Times and World News* (3 November 1994).

"Learning That Breaks Distance Barriers," *Richmond Times-Dispatch* (19 April 1995).

"Revolution in Higher Education," *The Washington Times* (9 March 1997).

"How Women Actually Perform in Distance Education," *Chronicle of Higher Education* (11 September 1998).

"Let ODU Bring Opportunity to N.C.," *The News and Observer* (Raleigh, NC: 13 November 1998).

"Fences in Higher Education," *The Washington Times* (22 February 1999).

"Protectionism in Higher Education," *Boston Globe* (27 April 1999).

"Revolution in Higher Education," *Al-Muftah* (September 1999).

"Interview with James V. Koch," *Chronicle of Higher Education* (19 May 2000).

"Person to Person Interview with James V. Koch," *Athletic Business* (May 2000).

"Old Fashioned Protectionism in Higher Education," *Distance Education* (1 June 2000).

"Major League Sports Teams Often Fall Short for Cities," *The Virginian Pilot* (19 November 2001)

“The Cost of War in Iraq,” *The Missoulian* (16 February 2003)

“Housing Market Stable if Navy Stays,” *Virginian-Pilot* (27 August 2003), Gil Yochum, co-author.

“U.S. Jobless Statistics Aren’t Always Reliable,” *Virginian-Pilot* (15 February 2004)

“The Pros and Cons of Off-Shore Jobs,” *The Daily Press* (7 April 2004)

“Two Major Economic Issues Confront Bush: Deficit, Energy,” *Virginian-Pilot* (28 November 2004)

“Harvard’s President Shouldn’t Be Gagged,” *Virginian-Pilot* (25 January 2005)

“It’s Not About the Coffee,” *Daily Press* (14 August 2005)

“BRAC,” *Virginian-Pilot* (28 August 2005), with V. Agarwal and G. Yochum

“The Race to the Bottom of the Bay,” *Daily Press* (September 2005)

“Alternative to Price Gouging is Worse,” *Virginian-Pilot* (5 October 2005)

“Gauging Wal-Mart,” *Virginian-Pilot* (9 April 2006)

“Immigration,” *Virginian-Pilot* (16 July 2006).

“The Most Important Economist You Never Heard of,” *Virginian-Pilot* (19 November 2006).

“How to Price the Internet,” *Virginian-Pilot* (18 February 2007).

“Foreign Firms Can---And Do---Operate Our Ports Safely,” *Virginian-Pilot* (24 June 2007).

“The Gas Tax Versus the CAFE,” *Virginian-Pilot* (13 January 2008).

“A Sensible Tax,” *Bacon’s Rebellion* (28 January 2008),

<http://www.baconsrebellion.com/Issues08/01-28/Koch.php>.

“User Fees in Transportation,” *Roanoke Times* (9 June 2008). This piece appeared in a half-dozen other newspapers in Virginia about the same time.

“Local Economy Will Bottom Out in 2010: Interview with James V. Koch,” *Inside Business* (6 January 2009).

“A Word from the Economists,” *Inside Business* (23 February 2009).

“Let’s Raise Fuel Prices, Not Fuel Standards,” *Daily Press* (28 June 2009).

“The sea is rising and coastal land is sinking, and local leaders should make flooding a priority issue,” *Daily Press* (13 January 2010).

“Like the Pharmaceutical Market: The Real Cost of College Textbooks,” *New York Times* (26 July 2010).

“Down: Costs Appear to Exceed Benefits (Light Rail),” *Virginian-Pilot* (18 October 2010).

“World War II Lessons Valid 70 Years Later,” *Virginian-Pilot* (6 May 2012).

“Economic Impact Studies,” *Virginian-Pilot* (November 2012).

“Overcoming the Inertia of Higher Education,” *Richmond Times Dispatch* (23 May 2014).

“The State of the Commonwealth,” *Richmond Times Dispatch* (4 October 2016).

“College Costs Are Out of Control,” *Richmond Times Dispatch* (29 January 2017).

“Rising College Costs,” *Roanoke Times* (12 February 2017).

“No College Kid Needs a Water Park to Study,” *The New York Times* (9 January 2018).

“How Rising College Costs and Student Debt Contribute to a Social-Mobility Crisis,” Interview in the *Chronicle of Higher Education* (July 8, 2019).

“The Case for Saying No to Tuition and Fee Increases,” Interview in the *Chronicle of Higher Education* (July 14, 2019).

“Economic Diversity at Virginia’s Public Universities,” *Richmond Times-Dispatch* (July 19, 2019).

“Casino Estimations Deserve Closer Scrutiny,” *Virginian-Pilot* (February 2, 2020).

Casino Interview, *Bold Dominion* (November 2020),
<https://bolddominion.org/episodes/wj5vla1cyqq8njks6o7g244mgprej>.

“Tunnel Deal Remains an Anchor on Hampton Roads,” *Virginian-Pilot* (April 19, 2021).

Dozens of other opinion pieces in the *Virginian-Pilot* dealing with Old Dominion University

Selected Consultants

Mid-State Educational Consultants
Northern Illinois Gas Company
State Farm Insurance Company
Synergy, Inc., Washington, DC
Curtis Engine Company
Air Line Pilots Association
National Football League Players Association
Illinois Bankers Association
Underwriters Adjustment Company
State of Illinois Advisory Council on Vocational Education
National Endowment for the Humanities
College Football Association
Association of Intercollegiate Athletics for Women
World Bank
Kingdom of Jordan
Weeks Seed Company
Hampton Roads Economic Development Alliance
AGL Resources
Virginia Natural Gas
Dominion Virginia Resources
Virginia Manufacturers Association
Cox Communications
CW Optics
Eastern Virginia Medical School
Bon Secours Health System
Amerigroup, Inc.
WellCare Health Plans, Inc.
Bayshore Concrete
Valley Health System
American Institute of CPAs, Washington, DC
Defense Contractors Audit Institute, Memphis, TN

CRT Tanaka, VA
Towne Bank, Hampton Roads, VA
Lumina Foundation
City of Portsmouth, VA
City of Virginia Beach, VA
Southern Coalition for Social Justice
University of Georgia Board of Regents
Partners for Affordable Excellence @ EDU
Nansemond Suffolk Academy, VA
University Health Systems, NC
Eastern Virginia Medical School
City of Portsmouth, VA
City of Virginia Beach, VA
Warren Thrasher, Inc., Chesapeake, A

Consultant And/Or Expert Court Witness: Law Firms, Organizations

Jenner and Block, Chicago, IL
Jerome Torshen, Chicago, IL
McDermott, Will and Emery, Chicago, IL
Scheider, Reilly, and Zabin, Boston, MA
Welburn and Ley, Boston, MA
Morris Michelson, Boston, MA
McMahon and McMahon, Providence, RI
Vonachen, Cation, et al., Peoria, IL
Bane, Allison, et al., Bloomington, IL
Mort Segall, Champaign, IL
Walstad and Asselin, Washington, DC
Dykema and Gossett, Detroit, MI
Lovett and Linder, Providence, RI
Belford and Belford, Fall River, MA Choate, Halsey, and Stewart, Boston, MA
Harold Howard, San Francisco, CA
Finn and Crane, Cambridge, MA
Belli, Weil, and Jacobs, Rockville, MD
Guy Gallone, Cranston, RI
Dale Grant, North Attleboro, MA
Shanahan and Quinn, Providence, RI
Van Treese and Wyndham, Indianapolis, IN
Lowe, Steele, et al., Indianapolis, IN
Renouf and Polivy, Washington, DC
Crowe and Dunlevy, Oklahoma City, OK
Evans, Kitchell and Jenckes, Phoenix, AR
Browne, Torrance, et al, Marion, IN
Sommers and Barnard, Indianapolis, IN
White, Beasley, et al., Muncie, IN

Chapleau and Farabaugh, South Bend, IN
Powers, Harsh, and Kinder, Providence, RI
Gordon, Silberman, Wiggins and Childs, Birmingham, AL
Cain, Hibbard, and Myers, Pittsfield, MA
Nazarian and Nocera, Pawtucket, RI
Charles Gray, Chester, VA
Penny and Barnes, Elizabeth City, NC
Payne, Gates, Farthing, and Radd, Norfolk, VA
Collier, Shannon, Rill and Scott, Washington, DC
King, Pagano, and Harrison, Washington, DC
Vandeventer, Black, Meredith, and Martin, Norfolk, VA
Stokes, Timms, Bell and Vaiden, Norfolk, VA
Hopkins and Associates, Tarboro, NC
Philip Liebman, Virginia Beach, VA
Jon Paulson, Accomack, VA
McGuire Woods, Norfolk, VA and Richmond, VA
Reid Ervin, Norfolk, VA
Gary, Williams, Parenti, et al., Stuart, FL
Tricia Hoffler, Norfolk, VA
Hazel, Thomas, et al., Richmond, VA
LeClaire Ryan, Alexandria, VA
Stokes, Timms, Bell and Vaiden, Williamsburg, VA
Poole Brooke Plumlee, Virginia Beach, VA
Kelley, Drye, et al., Washington, DC
Willcox and Savage, Norfolk, VA
Jones, Blechman, Woltz and Kelly, Newport News, VA
Williams and Mullen, Richmond, VA
U.S. Department of Justice
Bruce J. Klores and Associates, PC, Washington, DC
The Cochran Firm, Washington, DC
McCandlish, Holton, Richmond, VA
Wolcott Rivers Gates, Virginia Beach, VA
Adler, Murphy and McQuillen, Chicago, IL
Oast Law Firm, Virginia Beach, VA
Judicial Conference of the Fourth Federal Court Circuit
Southern Coalition, Raleigh, NC
Partners for College Access Foundation, VA
Virginia Wind Energy Coalition, VA
Williams and Mullen, Norfolk, VA
Arent Fox, New York City
Fourth Judicial Circuit, United States District Courts
Pierce and Thornton, Norfolk, VA
Sands, Anderson, Richmond, VA
Schrempf and Ware, Newport News, VA
Davis Law Group, Chesapeake, VA
Clyde and Company, New York City

Clarke, Dolph, Hull & Brunick, Virginia Beach
Singer Legal Group, Virginia Beach
Rutter Mills, Norfolk, VA
Howard & Howard, Virginia Beach, VA
Anchor Legal Group, Virginia Beach, VA

Consultant and/or Expert Witness: Colleges and Universities

Alabama A&M University
Albright College (PA)
Ashland University (OH)
Auburn University (AL)
Bethany College (WV)
Birmingham Southern College (AL)
Bishop State Community College (AL)
California Lutheran University
Coastal Carolina University (SC)
College of DuPage (IL)
Community College of Baltimore County (MD)
Defense Contractors Auditors Institute (TN)
Eastern Kentucky University
Eastern Virginia Medical School
Eastern Washington University
Florida Gulf Coast University
Florida Institute of Technology
Franklin University (OH)
Grambling State University (LA)
Hood College (MD)
Illinois State University
Louisiana Tech University
Marian College (WI)
Molloy College (NY)
Morgan State University (MD)
Muhlenberg College (PA)
Newberry College (SC)
Nicholls State University (LA)
Norfolk State University (VA)
Regent University (VA)
Sierra Nevada College (NV)
Stephens College (MO)
Sterling College (KS)
St. Leo University (FL)
Talladega College (AL)
Towson University (MD)
Truett-McConnell College (GA)

Union Institute and University (OH, VT)
University of Central Florida
University of Hawai'i
University of Louisiana Lafayette
United States Air Force University (AL)
University of Louisiana Monroe
University of New Haven (CT)
University of Pittsburgh (PA)
University of the South (TN)
University of Central Florida
University of West Florida
Virginia State University
Virginia Wesleyan University
Waynesburg College (PA)
Wesley College (DE)
Western Kentucky University
Western Maryland College
Westminster College (UT)
Wheeling Jesuit University (WV)
Yavapai College (AZ)

020122

Douglas Hornsby
v.
United States of America, et al. Investigation

Gregory Paulsen
Mechanical Engineer

January 3, 2025
CED Case No. 15954.1



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Douglas Hornsby v. United States of America, et al. Investigation
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Introduction

CED Technologies, Inc. [CED] was asked to perform an investigation and review of contractor conduct regarding a fatality aboard a United States Naval Vessel undergoing a shipyard selected restricted availability period. It was reported that a subcontractor performing fire watch duties was caught in the path of an engineering propulsion intake door.

CED's investigation is ongoing; therefore, the opinions and conclusions presented in this report are only current as of the date of issuance. CED reserves the right to modify, add, or delete conclusions should new information become available. Exhibit A attached to this report contains the curriculum vitae of this engineer's education, experience, qualifications, and publications.

Background

On the morning of March 15, 2021, the guided missile destroyer USS McFaul [DDG 74] was docked undergoing a shipyard selected restricted availability [SRA] at the General Dynamics-National Steel and Shipbuilding Company [NASSCO] facility in Norfolk, Virginia. DDG 74 was in a shutdown condition and was manned by ship's force and NASSCO/Repair Activity personnel.

It was reported that Ms. Cynthia Gary was performing her assigned duties as a fire watch for hot work being performed by Coastal Mechanical Systems. The hot work was being performed on the clean side [interior] of the #2 Ship's Service Generator – Turbine Generator [#2 SSGTG] intake stack. Ms. Gary was assigned to the dirty side [exterior] of the #2 SSGTG intake stack one deck below the hot work being performed. Ms. Gary positioned herself in the opening for the stack's blow in door [BID] to observe the areas below the hot work. While in this position, the BID shut, fatally trapping Ms. Gary.

Investigation

CED's investigation included a review of the following written materials:

1. Complaint
2. Expert Reports:
 - a. Chester D. Rudolf III, PE, submitted November 28, 2024.
3. Depositions:
 - a. LCDR Aaron Getty, taken July 22, 2024.
 - b. GSMCS Robbie Goff, taken August 30, 2024.
 - c. GSMC Anita Roberts, taken September 25, 2024.
 - d. GSM1 Austin Roberts, taken September 25, 2024.
 - e. Douglas Helms, taken December 10, 2024.
4. Discovery:
5. NAVSEA Tag-out Users Manual – NAVSEA 0400-AD-URM-010, Revision 8.
6. United State of America / General Dynamics NASSCO Norfolk Contract N00024-16-D-4408.
7. S9234-GB-MMA-010 – Technical Manual for Moisture Separator/Blow-In Panel Set. November 1993.
8. S9234-GB-MMA-010 – Technical Manual for Moisture Separator/Blow-In Panel Set. June 2018.
9. OSHA 1915.504 – Fire Watches.
10. DDG 74 Maintenance Requirement Cards:
 - a. S-1 Inspect Moisture Separator, Inspect and Lubricate Blow-in Panels, Test Heat Trace, and Test Blow-in Panel Automatic Operation.
 - b. S-5 Test Blow-in Doors Automatic Operation, Inspect and Lubricate Moisture Separator/Blow-In Panels and Test Heat Trace.
 - c. U-3 Replace Blow-In Door Gasket.

11. General Gas Turbine Bulletin (GGTB) NR. 28 Revision 2 – April 30, 2018.
12. General Gas Turbine Bulletin (GGTB) NR. 28 – April 1, 2016.
13. General Gas Turbine Bulletin (GGTB) NR. 28 Revision 3 – August 24, 2021.
14. Hot Work Permit, dated March 16, 2021/0600.
15. Contractor Work Authorization Forms [WAF]:
 - a. WAF No. 0271
 - b. WAF No. 0201
16. OSHA Citations:
 - a. Coastal Mechanical, issued August 31, 2021.
 - b. Harbor Industrial Services, issued August 31, 2021.
17. Department of the Navy Notice of Claim – from Douglas Hornsby, dated December 10, 2021.

Expert Report by Chester Rudolf, PE: This report reached the following conclusions and opinions:

- Concluded (among other conclusions):
 - Failure of the RA to follow the NavSea Tag-out Manual to properly review the tag-out procedure with the Authorizing Officer before posting of the tags associated with the BID's. The WAF's submitted should also have been more specific in the proposal for tag out. System schematics should have also been reviewed with the Ship's Force Authorizing Officer prior to tagging.
 - There is no evidence of the RA properly warning the fire watch of the pinch hazards associated with open BID's.

USA/NASSCO Contract: This contract revealed the following information:

- Option until funding until per FAR 52.232-18 – Availability of Funds as FAR 52.232-19 Availability of Funds for the Next Fiscal Year. The Contractor shall provide all labor, materials, facilities, supervision and equipment to meet the requirements outline in Section C. All work shall be completed in accordance with all applicable local, State,

Federal and Navy rules and regulations whether they are explicitly written/referenced in the DD 1155 or not.

OSHA 1915.504 : This directive revealed the following information:

- 1915.504(a) ***Written fire watch policy.*** The employer must create and keep current a written policy that specifies the following requirements for employees performing fire watch in the workplace:
 - 1915.504(a)(1) The training employees must be given (§ 1915.508(c) contains detailed fire watch training requirements);
 - 1915.504(a)(2) The duties employees are to perform;
 - 1915.504(a)(3) The equipment employees must be given; and
 - 1915.504(a)(4) The personal protective equipment (PPE) that must be made available and worn as required by 29 CFR Part 1915, Subpart I.
- 1915.504(b) ***Posting fire watches.*** The employer must post a fire watch if during hot work any of the following conditions are present:
 - 1915.504(b)(1) Slag, weld splatter, or sparks might pass through an opening and cause a fire;
 - 1915.504(b)(2) Fire-resistant guards or curtains are not used to prevent ignition of combustible materials on or near decks, bulkheads, partitions, or overheads;
 - 1915.504(b)(3) Combustible material closer than 35 ft. (10.7m) to the hot work in either the horizontal or vertical direction cannot be removed, protected with flame-proof covers, or otherwise shielded with metal or fire-resistant guards or curtains;
 - 1915.504(b)(4) The hot work is carried out on or near insulation, combustible coatings, or sandwich-type construction that cannot be shielded, cut back, or removed, or in a space within a sandwich type construction that cannot be inerted;
 - 1915.504(b)(5) Combustible materials adjacent to the opposite sides of bulkheads, decks, overheads, metal partitions, or sandwich-type construction may be ignited by conduction or radiation;

- 1915.504(b)(6) The hot work is close enough to cause ignition through heat radiation or conduction on the following:
 - 1915.504(b)(6)(i) Insulated pipes, bulkheads, decks, partitions, or overheads; or
 - 1915.504(b)(6)(ii) Combustible materials and/or coatings;
- 1915.504(b)(7) The work is close enough to unprotected combustible pipe or cable runs to cause ignition; or
- 1915.504(b)(8) A Marine Chemist, a Coast Guard-authorized person, or a shipyard Competent Person, as defined in 29 CFR Part 1915, Subpart B, requires that a fire watch be posted.
- 1915.504(c) *Assigning employees to fire watch duty.*
 - 1915.504(c)(1) The employer must not assign other duties to a fire watch while the hot work is in progress.
 - 1915.504(c)(2) Employers must ensure that employees assigned to fire watch duty:
 - 1915.504(c)(2)(i) Have a clear view of and immediate access to all areas included in the fire watch;
 - 1915.504(c)(2)(ii) Are able to communicate with workers exposed to hot work;
 - 1915.504(c)(2)(iii) Are authorized to stop work if necessary and restore safe conditions within the hot work area;
 - 1915.504(c)(2)(iv) Remain in the hot work area for at least 30 minutes after completion of the hot work, unless the employer or its representative surveys the exposed area and makes a determination that there is no further fire hazard;
 - 1915.504(c)(2)(v) Are trained to detect fires that occur in areas exposed to the hot work;

- 1915.504(c)(2)(vi) Attempt to extinguish any incipient stage fires in the hot work area that are within the capability of available equipment and within the fire watch's training qualifications, as defined in § 1915.508;
 - 1915.504(c)(2)(vii) Alert employees of any fire beyond the incipient stage; and
 - 1915.504(c)(2)(viii) If unable to extinguish fire in the areas exposed to the hot work, activate the alarm.
- 1915.504(c)(3) The employer must ensure that employees assigned to fire watch are physically capable of performing these duties.

Hot Work Permit: This permit revealed the following information:

- Located at 02-242-0-Q.
- Grinding, Welding and Plasma Cutting.
- Scope of Work – Remove and Install deck and inserts.
- Hot Work Operator [HWO] and Fire Watch [FW] to Validate and PAI/HWS to verify conditions:
 - Qualified FW assigned (must have proof of qualification and be identified as FW)
 - HWO has ensured FW has immediate access, and established communications.

NAVSEA Tag-out Users Manual: This manual revealed the following information:

- 1.3.1.d Ship's Force is responsible for ensuring the adequacy and accuracy of all tag-outs, including those proposed by the RA. They shall also verify that tags, which are no longer needed, are removed as soon as possible after the operation/work line item(s) has been cleared. Ship's Force is responsible for system restoration (e.g., valve/switch lineups) after tags are cleared.
- 1.3.3. Repair Activity
 - a. The RA is responsible for:
 - (1) Ensuring personnel understand and comply with this manual including their sub-contractors.

- (2) Reviewing tag-outs associated with RA work.
 - (3) Ensuring the accuracy and adequacy of tag-outs before signing the **Repair Activity Rep** block of the line item. This review shall ensure that enough tags are used to completely isolate the system, piping, or circuit being worked on or to prevent operation of a system or component from all stations that could exercise control. Approved system diagrams or circuit schematics shall be used to determine the adequacy of all tag-out actions. When local instructions allow, the documented verification signature made by a qualified repair activity individual proposing the tag-out may be used as the repair activity's validation of the adequacy and accuracy of a tag-out. This allowance only applies when the proposed tag-out and the authorized tag-out are identical. The RA Representative authorizing the line item remains responsible for ensuring the tag-out is compatible with system status and ship/plant conditions.
 - (4) Ensuring tags that are no longer needed, are authorized for removal as soon as possible after the operation/work line item has been signed as completed.
 - (5) Ensuring qualified personnel act as the RA Representative for tag-out procedures.
- **1.4 TRAINING AND QUALIFICATIONS.**
 - 1.4.1 All individuals who perform work aboard Naval Vessels shall be indoctrinated in basic purpose, use and restrictions associated with this manual. Additionally, personnel indoctrination and training shall include that the RA employee will be provided the opportunity to review isolations and system conditions established for their work.
 - 1.4.2 Personnel assigned to prepare tag-outs, review tag-outs, position equipment, post (attach) tags, check posted tags, clear (remove) tags, or perform tag audits, shall be qualified on this tag-out manual. Formal notices which list qualified personnel by name are not required by this manual. The Authorizing Officer is responsible for ensuring that Ship's Force personnel assigned to make a tag-out are qualified to perform the duties under this manual.

- a. Tag-out User's Manual training topics shall be included in the Ship's, and RA, continuing training program.
- b. The term qualified *as* used in this Tag-out User's Manual means that the person assigned to perform a tag-out function is knowledgeable about the requirements of this manual and is knowledgeable about the involved system/equipment.
- c. Ship's Force qualification in this Tag-out User's Manual should be done by the completion of 3M 301 Personnel Qualification Standard, and if required, completion of departmental qualifications.
- d. RA personnel are qualified in this Tag-out User's Manual by successful completion of the activity's training program. A formal system should be in place at the RA for performing and tracking qualifications of personnel on this manual.

OSHA Citations These citations revealed the following information:

- Coastal Mechanical Systems, LLC:
 - Citation 1 Item 1 Type of Violation: **Serious**
 29 CFR 1915.89(c)(1): The employer did not ensure that, before any authorized employee performed servicing when energization or startup, or the release of hazardous energy, may occur, all energy sources were identified and isolated, and the machinery, equipment, or system were rendered inoperative.
 On or about 03-15-2021 and times prior thereto, onboard the USS McFaul, DDG-74 located at General Dynamics - NASSCO Norfolk 200 Ligon Street. Norfolk, VA 23523: Employee(s) were exposed to pinch point and crushing hazards from a gas turbine engine blow-in door that was tagged out in the open position and not depressurized, de-energized, restrained, or isolated from all energy sources of power. No other verification of additional safety measures necessary to provide the equivalent safety available from the use of a lock were implemented.
- Harbor Industrial Services, LLC:

- Citation 1 Item Type of Violation: **Serious**

29 CFR 1915.89(c)(1): The employer did not ensure that, before any authorized employee performed servicing when energization or startup, or the release of hazardous energy, may occur, all energy sources were identified and isolated, and the machinery, equipment, or system were rendered inoperative.

On or about 03-15-2021, and times prior thereto, onboard the USS McFaul, DDG-74 located at General Dynamics - NASSCO Norfolk 200 Ligon Street. Norfolk, VA 23523: Employee(s) were exposed to pinch point and crushing hazards from a gas turbine engine blow-in door that was tagged out in the open position and not de-pressurized, de-energized, restrained, or isolated from all energy sources of power. No other verification of additional safety measures necessary to provide the equivalent safety available from the use of a lock were implemented.

Deposition of Douglas Helms: This deposition revealed the following information:

- WAF coordinator at NASSCO.
- Answered to NASSCO : “In the trailer I have the overall project manager for NASSCO for the McFaul availability.” [36]
- Regarding how he and NASSCO coordinated work during the SRA: [37]

Q: So the overall project manager for NASSCO was, typically, in that trailer?

A: He sat at one end of the trailer, he had his office down there. Yeah. I could talk to him about, you know, upcoming evolutions, you know, and everybody else had work items, they covered work items, all the other managers in there, and they would say, "Okay, yeah, this work item is coming up", and I'd say, "Well, I haven't even got a WAF yet for it. Do you want to call that company or whoever's doing the work to let them know to get their WAF in?" So it's a coordination thing. I would see

them every morning, I would come down at lunch and be there, and then in the afternoon maybe some were there, maybe not, but that's--

Q: Okay.

A: But I would let them know, "Okay. I've got this many. This is how many WAF'S we have. This is how many we have authorized". Authorized is they can go to work, you know, go to work on those items.

- Both he and the repair activities had access to ESOMs.

Discussion

The USS McFaul [DDG 74] was engaged in an SRA at the General Dynamics – NASSCO shipyard facility. The record shows that NASSCO, through project management and work authorization facilitation called out in their contract with the United States, controlled work scheduling of contractors hired by NASSCO. Administrative practices, as contractually called out, controlled what work was performed at what time, with what materials, and supplied a method through the use of Work Authorization Forms [WAFs] to ensure proper job completion and safety for the workers involved.

DDG 74 was shut down for the SRA period. While the ship was Personnel on DDG 74, referred to in the contract as Ship's Force, not formally turned over to NASSCO for the SRA, all ship repair operations were turned over to NASSCO with the Ship's Force keeping control and custody of DDG 74. Ship's force were on hand in the ship yard to render assistance to NASSCO and it's workers and subcontractors in the form of administrative help to put systems and areas of the ship in a ready to repair status. One form of administrative assistance the DDG 74 had contractually agreed to was, as experts on the ship's systems, to tag out systems on board to provide a safe environment on the systems or areas to be worked on by NASSCO and/or their contractors.

The record shows that NASSCO provided the requirement to use and the methods for using WAFs to perform repair work scheduled by the contract's scope of work. NASSCO's WAF administrator, Douglas Helms, testified he would issue and record WAFs for jobs scheduled by NASSCO's project management. Regarding tag outs, the ship's force would receive a WAF from a party that desired to do repair work on the DDG 74. Ship's force, using their system expertise and the Navy's Tag-out Users Manual, would generate, based on ship's drawings, schematics, etc., a tag out for the requesting party. The requesting party would review the tag out for applicability and safety for their scheduled job and if satisfied, would allow and verify with the ship's force the hanging of the tags. Testimony from NASSCO stated that the party owning the WAF and requesting the tag out had the ability to ask for changes to the tag out in the review stage if it did not fit their requirements. DDG 74 personnel did not control the WAF generation, record keeping, or scheduling of the jobs associated with the WAFs. The WAF generation, record keeping, or scheduling of the jobs associated with the WAFs was controlled by NASSCO.

AIT Marine requested and was issued WAF 0271 on January 27, 2021. The Job Description of the WAF stated:

*KTR request Blow-in door to be tagged out in the open position
in order to remove and install new gasket in compartment 01-
260-1-Q.*

DDG 74 personnel generated a tag out based on the maintenance requirement card U-3: Replace Blow-In Door Gasket, ship's drawings, and the directives from the Tag-out Users Manual. MRC U-3 was used due to its correlating requirement of tagging the BID open for BID gasket replacement matching the AIT WAF request. Kelvin Buie of AIT witnessed and verified the tag out and tag hanging. In summary, the tag out was generated and hung in accordance with the Navy Tag-out Users Manual and the WAF requirements controlled by NASSCO. Additionally, it must be noted that this tag out was for a WAF requested by AIT for a gasket installation.

Coastal Mechanical Systems requested and was issued WAF 0201 on January 5, 2021.

The Job Description of the WAF stated:

Power-tool clean each surface to accomplish ultrasonic test for structural integrity. Remove existing and install new deck plate, bulkhead plate, structural stiffener, and exhaust duct stiffener to include the removal and reinstallation of insulation.

No tag out was required.

A hot work permit [HWP] was issued to Coastal on March 3, 2021. The scope of work was “remove and install deck and inserts.” Included on the HWP were requirements similar to what OSHA 1915.504 directs. The record does not show if Ms. Gary was a qualified fire watch in accordance with OSHA requirements. However, the requirements of both the HWP and OSHA directives were not met due to the fact that Ms. Gary positioned herself in the open BID door way to be able to do her fire watch duties and communicate with the hot work operators. This deficiency in Coastal’s hot work operation led her to be in a potential pinch point due to Coastal’s lack of knowledge regarding the safety of the position Ms. Gary had to be in. The record appears to show that Coastal made no effort to ensure the safety of its fire watch’s position or look for alternatives. Had Ms. Gary been positioned properly by Coastal to be able to perform her duties as fire watch, her accident would not have occurred. DDG 74 personnel had no control over Coastal’s decision to position Coastal’s fire watches. Hot work and fire watches were the responsibility of Coastal – DDG 74 was only required to be informed and aware of hot work occurring. The WAF issued for the gasket replacement by NASSCO to AIT had been issued almost three months prior to the hot work performed by Coastal. It is unclear why this delay happened, but as schedulers of work and issuers of WAFs, NASSCO would have been aware of uncompleted WAFs. NASSCO certainly had the opportunity to cancel the WAF when the work scheduled hadn’t been done when the WAF was issued.

NASSCO as project manager would certainly have had the opportunity to notice scheduled work was not occurring in accordance with their timeline. Cancelling the WAF would have also caused the associated tag out to be cleared, thereby allowing the BID to be closed when not undergoing maintenance or repair. Nothing in the record explains the delay of the gasket replacement, and nothing in the record explains the allowance of the WAF and its corresponding tag out to remain active when no work was occurring. Had the WAF been cancelled, the BID would not have been open at the time of the accident, and certainly Ms. Gary could not have used it for attempting to do her fire watch duties and thus her accident would not have occurred.

Conclusions

Based on the inspections, review of the reports, discovery, and testimony, CED concludes the following to a reasonable degree of engineering certainty:

1. USS McFaul DDG 74 ship's force personnel performed the tag out for the gasket replacement in accordance with the Navy tag-out users manual and the MRC U-3.
2. USS McFaul DDG 74 ship's force personnel did not perform the gasket tag out to support the hot work being performed by Coastal.
3. If Ms. Gary was qualified in accordance with OSHA 1915.504 and Coastal's hot work permit, she would have known that the method she was using or being instructed to use to be a fire watch was incorrect.
4. Had Ms. Gary found or been instructed to find an alternative method to maintain communication with the hot work operators or have immediate access to the hot work area, her accident would not have occurred.
5. The tag out for the gasket replacement was verified by AIT personnel to be satisfactory for their gasket replacement job.
6. The tag out had been requested, verified and hung to meet the AIT WAF almost three months prior to Ms. Gary's accident. Had NASSCO cancelled the WAF due to

noncompletion after issue, the tag out would have been cleared, the BID been closed, and Ms. Gary would not have attempted to use the BID opening as a fire watch access.

The intention of the client for whom this report has been prepared, and the intention of the author, is to generate expert witness engineering reports, calculations, and supplemental materials solely in connection with expert witness testimony or anticipated testimony for use in a judicial proceeding. The analysis and conclusions provided are not to be relied upon for any other specific purpose related to safeguarding the life, health or property of any persons or entities whatsoever, and are provided solely for use in the process for which the services of the author were retained.

CED reserves the right to amend this report should additional material become available. If there are any questions about the content of this report, or if new information becomes available, please contact our offices.

Submitted by:

A handwritten signature in black ink, appearing to read 'Greg Paulsen', written in a cursive style.

Gregory Paulsen
Mechanical Engineer



CURRICULUM VITAE
GREGORY J. PAULSEN, P.E.
Senior Mechanical Engineer

Academic Background

Masters of Engineering, Mechanical Engineering, University of South Carolina, 2006
Bachelors of Science, Mechanical Engineering, University of South Carolina, 1999

Registrations

Registered Professional Engineer, Commonwealth of Pennsylvania, License No. PE070829

Qualifications

CVFI, Certified Vehicle Fire Investigator, Registration No. 17275-9482v
CPE, Certified Plant Engineer. AFE Certification No. 891279
CFEI, Certified Fire and Explosion Investigator, Registration No. 17275-9482
CFPS, Certified Fire Protection Specialist, Certificate No. 3690
Certified Operator, Mobile Elevated Work Platforms and Telehandlers
Certified Training Instructor, Mobile Elevated Work Platforms and Rough-Terrain Forklifts,
Registration No. 37535
Certified Forklift Operator
OSHA 30 Hour – General Industry, 1910, April 2012
OSHA 30 Hour – General Construction, 1926, May 2012
OSHA 24 Hour – HAZWOPER, Hazardous Waste Operations and Emergency Response,
November 2013

Professional Work History

Mechanical Engineer, CED Technologies Inc., 2010 - Present
Chief Engineer/Partner, Nittany Biodiesel, LLC, State College, Pennsylvania, 2006 - 2010
Director of Engineering/Project Manager, Mixing and Mass Transfer Technologies, LLC, 2002 - 2010
Senior Mold Design Project Engineer, Corning Asahi Video, State College, Pennsylvania, 1999 - 2002
Nuclear Power Plant Supervisor, Mechanic & Operator, E-6 Submarines, United States Navy, 1984 - 1996

Areas of Expertise

Mechanical Systems Design and Analysis	Marine Systems
Vehicle Systems and Analysis	Crane Analysis and Design
Machinery – Operation, Guarding and Controls	Plumbing Systems
Factory Design and Operation	HVAC
Fire Investigation / Origin and Cause	Product Testing
Hydraulic Fracturing	Shale Development and Processing
Drilling Rig Safety	Welding, Brazing and Soldering
Manufacturing Processes and Design	Firefighting Experience
Fueling Systems and Equipment	
Mobile Elevated Work Platforms, Telehandlers, Forklifts and Skid-Steer	

BY PROVIDING THIS CURRICULUM VITAE AND FEE SCHEDULE, CED AND ENGINEER DO NOT AUTHORIZE USE OF ENGINEER'S NAME OR CURRICULUM VITAE AND FORBID IDENTIFYING ENGINEER AS A POTENTIAL OR ACTUAL EXPERT WITNESS IN ANY JUDICIAL PROCEEDING, WITHOUT EXPRESS WRITTEN AUTHORIZATION AND EXECUTION OF A RETAINER AGREEMENT WITH CED TECHNOLOGIES INTERNATIONAL INCORPORATED d/b/a CED TECHNOLOGIES INC.



EXHIBIT A

CURRICULUM VITAE
GREGORY J. PAULSEN, P.E.
Senior Mechanical Engineer

Professional Societies

National Society of Professional Engineers (NPSE)
American Society of Mechanical Engineers (ASME)
American Society of Civil Engineers (ASCE)
Association for Facilities Engineering (AFE)
American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
American Welding Society (AWS)

Professional Education

- Training on Mobile Elevating Work Platforms, 12 Professional Development Hours, Certificate of Completion, CED Technologies, Inc., May 2022
- Vehicle Fire, Arson & Explosion Investigation Science & Technology Seminar, NAFL, Lexington, Kentucky, September 2013
- International Association of Drilling Contractors – Rig Pass/SafeGulf/SafeLand USA, March 2013
- Graduate of Fundamentals of Fracturing from Petroleum Institute of Continuing Education

Firefighting Experience

Corning Fire Brigade
Firefighter / High Ropes Rescue Instructor / Confined Space Rescue Instructor
Berks County Firefighter
Basic Firefighting Certification
United States Navy
NSA – Military Housing Fire Brigade
Navy Training – Firefighter and Rescue Truck Apparatus Certification
Navy Training – Submarine Firefighter – USS NARWHAL – USS HOUSTON
Navy Training – Ship Firefighting and Damage Control – USS ORION – USS SIMON LAKE
Volunteer Fire Department, Westwood, Kentucky
Basic Firefighting Certification

BY PROVIDING THIS CURRICULUM VITAE AND FEE SCHEDULE, CED AND ENGINEER DO NOT AUTHORIZE USE OF ENGINEER'S NAME OR CURRICULUM VITAE AND FORBID IDENTIFYING ENGINEER AS A POTENTIAL OR ACTUAL EXPERT WITNESS IN ANY JUDICIAL PROCEEDING, WITHOUT EXPRESS WRITTEN AUTHORIZATION AND EXECUTION OF A RETAINER AGREEMENT WITH CED TECHNOLOGIES INTERNATIONAL INCORPORATED d/b/a CED TECHNOLOGIES INC.

**EXHIBIT A**

FEE SCHEDULE
Effective January 2023

GREGORY J. PAULSEN, P.E.
Senior Mechanical Engineer
\$435.00 per hour

Time

Engineering time is billed at the same rate for all services including research, review, analysis, testing, inspections, depositions, trial, testimony and travel. There are no charges or administrative fees for opening or maintaining case files.

Expenses

Normal expenses and costs will be charged to the case. These include:

Mileage	\$0.72 per mile
Digital Photographic and CD/DVD/USB	\$12.00
Photographic Prints	\$0.38 per photograph
Laboratory Usage Fee	At cost
Special Equipment for Testing	At cost
Testing Materials	At cost
Travel	At cost
Hotel, Meals, etc.	At cost

Materials and/or other specified expenditures that are required to the case will be charged at cost. Items purchased that are retained by CED and usable in other cases will not be charged.

Activities are billed monthly. All balances are due upon receipt of invoice. Rates are subject to change without notice. Unpaid bills are charged a service fee of 1 ½ % per month for unpaid balances.

CED reserves the right to require a retainer. This retainer is a forward payment of future services for which the client has contracted, retained and agreed upon the engineer's billable rates and expenses.

The receipt of the signed Client Letter of Agreement (LOA) or case file material received by CED indicates the acceptance of rates and terms and conditions of the LOA.

If there is a question about any item on our fee schedule, please call to discuss your concern. Our ultimate goal is to provide you with the highest level of service possible.

BY PROVIDING THIS CURRICULUM VITAE AND FEE SCHEDULE, CED AND ENGINEER DO NOT AUTHORIZE USE OF ENGINEER'S NAME OR CURRICULUM VITAE AND FORBID IDENTIFYING ENGINEER AS A POTENTIAL OR ACTUAL EXPERT WITNESS IN ANY JUDICIAL PROCEEDING, WITHOUT EXPRESS WRITTEN AUTHORIZATION AND EXECUTION OF A RETAINER AGREEMENT WITH CED TECHNOLOGIES INTERNATIONAL INCORPORATED d/b/a CED TECHNOLOGIES INC.

EXHIBIT B**Hornsby v. USA et al. - Materials reviewed by Gregory Paulsen, Mechanical Engineer**

Bates Range	Description
AAR 000001-6	Amended Autopsy Report
AIT 000001-105	AIT production (June 25, 2024)
AR 000001-33	Autopsy Photographs
CG 000001-6	Cynthia Gary & family photographs
CMS CIT 000001-9	Misc. documents Plaintiff obtained from OSHA
CMS000001-2	Misc. documents Plaintiff obtained from OSHA
DC 000001	Death Certificate
EMS 000001-4	EMS Report
HIS 000001-3	Misc. documents Plaintiff obtained from OSHA
HIS CIT 000001-11	Misc. documents Plaintiff obtained from OSHA
MCFAUL 000001-26	Photographs of/aboard USS McFAUL 2/2/23
NOC 000001-5	Misc. documents Plaintiff obtained from OSHA
OSHA 000001-96	Misc. documents Plaintiff obtained from OSHA
US000001-164	General Dynamics - NASSCO Norfolk Contract Documents
US000165-574	Misc. McFAUL SRA Documents
US000588-591	"Attachment A" - Incident Report submitted by NASSCO
US000592-697	Tag-Out Users Manual, Navsea 0400-AD-URM-010, Revision 08 28 OCT 2020
US000887-1557	Documents from Supplemental Initial Disclosures
US0001558-1596	Documents from Supplemental Initial Disclosures
US0001950-1992	Class Advisories & related documents
US0004673-5969	Additional USA-NASSCO Contract Documents
US0006212	BID Tech Manual JUN 2018
US0008613	Report RE: BID control switches
US0008632-11921	JFMM
US0011922-12672	NAVSEA Standard Items
US0012673-12741	2513 MRCs
US0012742-US0012745	NAVSEA Event Report #143195 (Redacted)
N/A (4 files)	Videos of blow-in filter door aboard USS McFaul
N/A	Deposition transcripts and exhibits (Getty, Goff, Preetam, Roberts, Buie, Helms)